General

Guideline Title

Heart failure: early recognition, and treatment of the patient at risk for hospital readmission. In: Evidence-based geriatric nursing protocols for best practice.

Bibliographic Source(s)

Schipper JE, Coviello J, Chyun DA. Fluid overload: identifying and managing heart failure patients at risk for hospital readmission. In: Boltz M, Capezuti E, Fulmer T, Zwicker D, editor(s). Evidence-based geriatric nursing protocols for best practice. 4th ed. New York (NY): Springer Publishing Company; 2012. p. 628-57.

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

Levels of evidence (I–VI) are defined at the end of the "Major Recommendations" field.

Parameters of Assessment

- Assess at initial encounter and every shift
  - *Baseline*: health history, New York Health Association (NYHA) classification of functional status and stage of heart failure (HF), cognitive, and psychosocial support systems (Brucks et al., 2005 [Level II])
  - *Symptoms*: dyspnea, orthopnea, cough, edema; vital signs: blood pressure (BP), heart rate (HR), respiratory rate (RR) (Pickering et al., 2005 [Level VI]; Pickering et al., 2008 [Level VI]; Sansevero, 1997 [Level VI]). Physical assessment with signs: rales or "crackles"; peripheral edema, ascites, or pulmonary vascular congestion of chest x-ray (Stevenson & Perloff, 1989 [Level II])
  - *Medications review*: Optimal medical regimen according to American College of Cardiology/American Heart Association/Heart Failure Society of America guideline unless contraindicated (Brenner et al., 2001 [Level II]; Riegel et al., 2009 [Level II]; Wing et al., 2003 [Level II]).
  - *Electrocardiogram/telemetry review*: heart rate, rhythm, QRS duration, QT interval (Bertoni et al., 2004 [Level VI]; Chyun et al., 2002 [Level VI])
  - Review echocardiography, cardiac angiogram, muga scan, cardiac computed tomography (CT), or magnetic resonance imaging (MRI) for left ventricle and valve function: left ventricular ejection fraction (LVEF) (Bertoni et al., 2004 [Level VI]; Chyun et al., 2002 [Level VI]; Lewis et al., 2003 [Level VI])
  - Laboratory value review (Cygankiewicz et al., 2009 [Level II]; Huang et al., 2007 [Level II]; Hunt et al., 2005 [Level I])
    - *Metabolic evaluation*: Electrolytes (hyponatremia, hypokalemia), thyroid function, liver function, kidney function

        - *Hematology*: Evaluation for anemia: hemoglobin, hematocrit, iron, iron-binding capacity, and B12 folic acid
        - Evaluation for infection (fever, white blood cells [WBCs] with differential, cultures)
    - *Impaired mobility/deconditioned status*: physical therapy or structured cardiac rehabilitation inpatient or outpatient
- Sensory impairment—vision, hearing—limitations in ability for self-care (Davos et al., 2003 [Level VI]; Faris et al., 2002 [Level III]).
- Signs and symptoms—assess for changes in mental status every shift (Davos et al., 2003 [Level VI]; Faris et al., 2002 [Level III]).

Nursing Care Strategies

- Obtain HF/cardiology and geriatric consultation (Rich et al., 1995 [Level V]; Naylor, 2006 [Level VI]; Naylor & Keating, 2008).
- Eliminate or minimize risk factors
    - Administer medications according to guidelines and patient assessment (Brenner et al., 2001 [Level II]; Riegel et al., 2009 [Level II]; Wing et al., 2003 [Level II]).
    - Avoid continuous intravenous infusion especially of saline (Cavallari et al., 2004 [Level IV]; Lancaster et al., 2003 [Level IV]; Riegel et al., 2009 [Level II]; Taylor et al., 2004 [Level II]).
    - Maintain euvolemia once fluid overload is treated. Prevent/promptly treat fluid overload, dehydration, and electrolyte disturbances. Maximize oxygen delivery (supplemental oxygen, blood, and BP support as needed (Cavallari et al., 2004 [Level IV]; Lancaster et al., 2003 [Level IV]; Riegel et al., 2009 [Level II]; Taylor et al., 2004 [Level II]).
    - Ensure daily weights accurately charted (Grady et al., 2000 [Level VI]; Riegel et al., 2004 [Level I]; Riegel et al., 2009 [Level II]).
    - Provide adequate nutrition with a 2-g sodium diet (see the National Guideline Clearinghouse [NGC] summary of the Hartford Institute for Geriatric Nursing guideline Nutrition in aging).
    - Provide adequate pain control (see the NGC summary of the Hartford Institute for Geriatric Nursing guideline Pain management in older adults).
    - Use sensory aids as appropriate.
    - Regulate bowel/bladder function.
- Provide self-care education with maintenance and management strategies (Masoudi et al., 2005 [Level IV]; Nesto et al., 2004 [Level VI]; Mulrow, Lau, & Brand, 2006).
    - Activity recommendation as appropriate to functional status. Assess for safety in ambulation hourly rounds with encouragement to toilet.
    - Facilitate rest with schedule of diuretic medications for limited nocturia.
    - Maximize mobility: limit use of urinary catheters.
    - Communicate clearly; provide explanations.
    - Emphasize purpose and importance of daily weights.
    - Dietitian referral for educational needs re-sodium.
- Identify care partners. Reassure and educate
    - Foster care support of family/friends.
    - Assess willingness and ability of care partner to assist with self-care: dietary needs of sodium restriction, daily weight logging, symptom recognition, and medical follow-up.

Follow-up Monitoring of Condition

- Decreased frequency of readmission as a measure of quality care
- Incidence of decompensated HF to decrease
- Patient days with symptoms of congestion to decrease
- Staff competence in prevention, recognition, and treatment of HF
- Documentation of a variety of interventions for HF

Definitions:

Levels of Evidence

Level I: Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

Level II: Single experimental study (randomized controlled trials [RCTs])

Level III: Quasi-experimental studies

Level IV: Non-experimental studies

Level V: Care report/program evaluation/narrative literature reviews

Level VI: Opinions of respected authorities/consensus panels

AGREE Next Steps Consortium (2009). Appraisal of guidelines for research & evaluation II. Retrieved from http://www.agreetrust.org/?o=1397 .

Adapted from: Melnyck, B. M. & Fineout-Overholt, E. (2005). Evidence-based practice in nursing & health care: A guide to best practice. Philadelphia, PA: Lippincott Williams & Wilkins and Stetler, C.B., Morsi, D., Rucki, S., Broughton, S., Corrigan, B., Fitzgerald, J., et al. (1998). Utilization-focused integrative reviews in a nursing service. Applied Nursing Research, 11(4) 195-206.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Heart failure
- Fluid overload

Guideline Category

Evaluation

Management

Clinical Specialty

Cardiology

Family Practice

Geriatrics

Internal Medicine

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Health Care Providers

Hospitals

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To provide a standard of practice protocol to reduce the incidence of hospital readmission of older adult patients with heart failure

Target Population

Adults aged 65 years and older

Interventions and Practices Considered

Assessment/Evaluation

1. Assessment of baseline, symptoms, medications, electrocardiogram/telemetry, imaging, laboratory values, mobility/deconditioned status at initial encounter and every shift
2. Sensory impairment: vision, hearing
3. Signs and symptoms: assessment for changes in mental status every shift

Management

1. Heart failure (HF)/cardiology and geriatric consultation
2. Elimination or minimization of risk factors
3. Self-care education with maintenance and management strategies
4. Identification of care partners
5. Reassurance and education

Major Outcomes Considered

- Frequency of readmission
- Incidence of decompensated heart failure
- Patient days with symptoms of congestion

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Although the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument (described in Chapter 1 of the original guideline document, *Evidence-based Geriatric Nursing Protocols for Best Practice*, 4th ed.) was created to critically appraise clinical practice guidelines, the process and criteria can also be applied to the development and evaluation of clinical practice protocols. Thus, the AGREE instrument has been expanded (i.e., AGREE II) for that purpose to standardize the creation and revision of the geriatric nursing practice guidelines.

The Search for Evidence Process

Locating the best evidence in the published research is dependent on framing a focused, searchable clinical question. The PICO format—an acronym for population, intervention (or occurrence or risk factor), comparison (or control), and outcome—can frame an effective literature search. The editors enlisted the assistance of the New York University Health Sciences librarian to ensure a standardized and efficient approach to collecting evidence on clinical topics. A literature search was conducted to find the best available evidence for each clinical question addressed. The results were rated for level of evidence and sent to the respective chapter author(s) to provide possible substantiation for the nursing practice

protocol being developed.

In addition to rating each literature citation as to its level of evidence, each citation was given a general classification, coded as "Risks," "Assessment," "Prevention," "Management," "Evaluation/Follow-up," or "Comprehensive." The citations were organized in a searchable database for later retrieval and output to chapter authors. All authors had to review the evidence and decide on its quality and relevance for inclusion in their chapter or protocol. They had the option, of course, to reject or not use the evidence provided as a result of the search or to dispute the applied level of evidence.

Developing a Search Strategy

Development of a search strategy to capture best evidence begins with database selection and translation of search terms into the controlled vocabulary of the database, if possible. In descending order of importance, the three major databases for finding the best primary evidence for most clinical nursing questions are the Cochrane Database of Systematic Reviews, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Medline or PubMed. In addition, the PsycINFO database was used to ensure capture of relevant evidence in the psychology and behavioral sciences literature for many of the topics. Synthesis sources such as UpToDate® and British Medical Journal (BMJ) Clinical Evidence and abstract journals such as Evidence Based Nursing supplemented the initial searches. Searching of other specialty databases may have to be warranted depending on the clinical question.

It bears noting that the database architecture can be exploited to limit the search to articles tagged with the publication type "meta-analysis" in Medline or "systematic review" in CINAHL. Filtering by standard age groups such as "65 and over" is another standard categorical limit for narrowing for relevance. A literature search retrieves the initial citations that begin to provide evidence. Appraisal of the initial literature retrieved may lead the searcher to other cited articles, triggering new ideas for expanding or narrowing the literature search with related descriptors or terms in the article abstract.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Levels of Evidence

Level I: Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

Level II: Single experimental study (randomized controlled trials [RCTs])

Level III: Quasi-experimental studies

Level IV: Non-experimental studies

Level V: Care report/program evaluation/narrative literature reviews

Level VI: Opinions of respected authorities/consensus panels

AGREE Next Steps Consortium (2009). Appraisal of guidelines for research & evaluation II. Retrieved from http://www.agreetrust.org/?o=1397 .

Adapted from: Melnyck, B. M. & Fineout-Overholt, E. (2005). Evidence-based practice in nursing & health care: A guide to best practice. Philadelphia, PA: Lippincott Williams & Wilkins and Stetler, C.B., Morsi, D., Rucki, S., Broughton, S., Corrigan, B., Fitzgerald, J., et al. (1998). Utilization-focused integrative reviews in a nursing service. Applied Nursing Research, 11(4) 195-206.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Not stated

Evidence Supporting the Recommendations

References Supporting the Recommendations

Bertoni AG, Hundley WG, Massing MW, Bonds DE, Burke GL, Goff DC Jr. Heart failure prevalence, incidence, and mortality in the elderly with diabetes. Diabetes Care. 2004 Mar;27(3):699-703. PubMed

Brenner BM, Cooper ME, de Zeeuw D, Keane WF, Mitch WE, Parving HH, Remuzzi G, Snapinn SM, Zhang Z, Shahinfar S. Effects of losartan on renal and cardiovascular outcomes in patients with type 2 diabetes and nephropathy. N Engl J Med. 2001 Sep 20;345(12):861-9. PubMed

Brucks S, Little WC, Chao T, Kitzman DW, Wesley-Farrington D, Gandhi S, Shihabi ZK. Contribution of left ventricular diastolic dysfunction to heart failure regardless of ejection fraction. Am J Cardiol. 2005 Mar 1;95(5):603-6. PubMed

Cavallari LH, Fashingbauer LA, Beitelshees AL, Groo VL, Southworth MR, Viana MA, Williams RE, Dunlap SH. Racial differences in

patients' potassium concentrations during spironolactone therapy for heart failure. Pharmacotherapy. 2004 Jun;24(6):750-6. PubMed

Chyun D, Vaccarino V, Murillo J, Young LH, Krumholz HM. Cardiac outcomes after myocardial infarction in elderly patients with diabetes mellitus. Am J Crit Care. 2002 Nov;11(6):504-19. PubMed

Cygankiewicz I, Gillespie J, Zareba W, Brown MW, Goldenberg I, Klein H, McNitt S, Polonsky S, Andrews M, Dwyer EM, Hall WJ, Moss AJ, MADIT II Investigators. Predictors of long-term mortality in Multicenter Automatic Defibrillator Implantation Trial II (MADIT II) patients with implantable cardioverter-defibrillators. Heart Rhythm. 2009 Apr;6(4):468-73. PubMed

Davos CH, Doehner W, Rauchhaus M, Cicoira M, Francis DP, Coats AJ, Clark AL, Anker SD. Body mass and survival in patients with chronic heart failure without cachexia: the importance of obesity. J Card Fail. 2003 Feb;9(1):29-35. PubMed

Faris R, Purcell H, Henein MY, Coats AJ. Clinical depression is common and significantly associated with reduced survival in patients with non-ischaemic heart failure. Eur J Heart Fail. 2002 Aug;4(4):541-51. PubMed

Grady KL, Dracup K, Kennedy G, Moser DK, Piano M, Stevenson LW, Young JB. Team management of patients with heart failure: A statement for healthcare professionals from The Cardiovascular Nursing Council of the American Heart Association. Circulation. 2000 Nov 7;102(19):2443-56. PubMed

Huang DT, Sesselberg HW, McNitt S, Noyes K, Andrews ML, Hall WJ, Dick A, Daubert JP, Zareba W, Moss AJ, MADIT-II Research Group. Improved survival associated with prophylactic implantable defibrillators in elderly patients with prior myocardial infarction and depressed ventricular function: a MADIT-II substudy. J Cardiovasc Electrophysiol. 2007 Aug;18(8):833-8. PubMed

Hunt SA, Abraham WT, Chin MH, Feldman AM, Francis GS, Ganiats TG, Jessup M, Konstam MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW, Antman EM, Smith SC Jr, Adams CD, Anderson JL, Faxon DP, Fuster V, Halperin JL, Hiratzka LF, Jacobs AK, Nishimura R, Ornato JP, Page RL, Riegel B, American College of Cardiology, American Heart Association Task Force on Practice Guidelines, American College of Chest Physicians, International Society for Heart and Lung Transplantation, Heart Rhythm Society. ACC/AHA 2005 guideline update for the diagnosis and management of chronic heart failure in the adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines [trunc]. Circulation. 2005 Sep 20;112(12):e154-235. PubMed

Lancaster KJ, Smiciklas-Wright H, Heller DA, Ahern FM, Jensen G. Dehydration in black and white older adults using diuretics. Ann Epidemiol. 2003 Aug;13(7):525-9. PubMed

Lewis EF, Moye LA, Rouleau JL, Sacks FM, Arnold JM, Warnica JW, Flaker GC, Braunwald E, Pfeffer MA, CARE Study. Predictors of late development of heart failure in stable survivors of myocardial infarction: the CARE study. J Am Coll Cardiol. 2003 Oct 15;42(8):1446-53. PubMed

Masoudi FA, Inzucchi SE, Wang Y, Havranek EP, Foody JM, Krumholz HM. Thiazolidinediones, metformin, and outcomes in older patients with diabetes and heart failure: an observational study. Circulation. 2005 Feb 8;111(5):583-90. PubMed

Mulrow C, Lau J, Brand M. Pharmacotherapy for hypertension in the elderly. Cochrane Database Syst Rev. 2006;(2):CD000028.

Naylor M, Keating SA. Transitional care. Am J Nurs. 2008 Sep;108(9 Suppl):58-63; quiz 63. [41 references] PubMed

Naylor MD. Transitional care: a critical dimension of the home healthcare quality agenda. J Healthc Qual. 2006 Jan-Feb;28(1):48-54. PubMed

Nesto RW, Bell D, Bonow RO, Fonseca V, Grundy SM, Horton ES, Le Winter M, Porte D, Semenkovich CF, Smith S, Young LH, Kahn R. Thiazolidinedione use, fluid retention, and congestive heart failure: a consensus statement from the American Heart Association and

American Diabetes Association. Diabetes Care. 2004 Jan;27(1):256-63. [51 references] PubMed

Pickering TG, Hall JE, Appel LJ, Falkner BE, Graves J, Hill MN, Jones DW, Kurtz T, Sheps SG, Roccella EJ. Recommendations for blood pressure measurement in humans and experimental animals: Part 1: blood pressure measurement in humans: a statement for professionals from the Subcommittee of Professional and Public Education of the AHA Council on HBP. Hypertension. 2005 Jan;45(1):142-61. PubMed

Pickering TG, Miller NH, Ogedegbe G, Krakoff LR, Artinian NT, Goff D, American Heart Association, American Society of Hypertension, Preventive Cardiovascular Nurses Association. Call to action on use and reimbursement for home blood pressure monitoring: executive summary: a joint scientific statement from the American Heart Association, American Society Of Hypertension, and Preventive Cardiovascular Nurses Association. Hypertension. 2008 Jul;52(1):1-9. PubMed

Rich MW, Beckham V, Wittenberg C, Leven CL, Freedland KE, Carney RM. A multidisciplinary intervention to prevent the readmission of elderly patients with congestive heart failure. N Engl J Med. 1995;333(18):1190-5. PubMed

Riegel B, Lee CS, Dickson VV, Carlson B. An update on the self-care of heart failure index. J Cardiovasc Nurs. 2009 Nov-Dec;24(6):485-97. PubMed

Riegel B, Naylor M, Stewart S, McMurray JJ, Rich MW. Interventions to prevent readmission for congestive heart failure. JAMA. 2004 Jun 16;291(23):2816; author reply 2816-7. PubMed

Sansevero AC. Dehydration in the elderly: strategies for prevention and management. Nurse Pract. 1997 Apr;22(4):41-2, 51-7, 63-66 passim. [32 references] PubMed

Stevenson LW, Perloff JK. The limited reliability of physical signs for estimating hemodynamics in chronic heart failure. JAMA. 1989 Feb 10;261(6):884-8. PubMed

Taylor AL, Ziesche S, Yancy C, Carson P, D'Agostino R Jr, Ferdinand K, Taylor M, Adams K, Sabolinski M, Worcel M, Cohn JN. Combination of isosorbide dinitrate and hydralazine in blacks with heart failure. N Engl J Med. 2004 Nov 11;351(20):2049-57. PubMed

Wing LM, Reid CM, Ryan P, Beilin LJ, Brown MA, Jennings GL, Johnston CI, McNeil JJ, Macdonald GJ, Marley JE, Morgan TO, West MJ, Second Australian National Blood Pressure Study Group. A comparison of outcomes with angiotensin-converting--enzyme inhibitors and diuretics for hypertension in the elderly. N Engl J Med. 2003 Feb 13;348(7):583-92. PubMed

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for selected recommendations (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Patient

- Absence of symptoms of congestion
- Stability of hemodynamic status (prior to acute decompensation)
- Return of functional status to baseline (prior to acute decompensation)
- Improved adherence to medical and self-care regimen
- Discharge to same destination as prehospitalization

Health Care Provider

- Regular use of self-care heart failure (HF) index screening tool
- Increased detection of symptoms before acute decompensation
- Implementation of appropriate interventions to prevent/treat volume overload
- Improved nurse awareness of patient/caregiver self-care confidence and ability
- Increased management using guideline-directed therapy

Institution

- Improved staff education and interprofessional care planning
- Appropriate implementation of HF specific treatments
- Decreased overall cost
- Decreased preventable readmission and length of hospital stay
- Decreased morbidity and mortality
- Increased referrals and consultation to above-specified specialists

Potential Harms

Not stated

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Mobile Device Resources

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Schipper JE, Coviello J, Chyun DA. Fluid overload: identifying and managing heart failure patients at risk for hospital readmission. In: Boltz M, Capezuti E, Fulmer T, Zwicker D, editor(s). Evidence-based geriatric nursing protocols for best practice. 4th ed. New York (NY): Springer Publishing Company; 2012. p. 628-57.

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012

Guideline Developer(s)

Hartford Institute for Geriatric Nursing - Academic Institution

Guideline Developer Comment

The guidelines were developed by a group of nursing experts from across the country as part of the Nurses Improving Care for Health System Elders (NICHE) project, under sponsorship of the Hartford Institute for Geriatric Nursing, New York University College of Nursing.

Source(s) of Funding

Hartford Institute for Geriatric Nursing

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Primary Authors: Judith E. Schipper, MS, NP-C, CLS, FNLA, FPCNA, Clinical Coordinator, Heart Failure Program, New York University Langone Medical Center, New York, NY; Jessica Coviello, MSN, APRN, Associate Professor, Yale University, New Haven, CT; Deborah A. Chyun, PhD, RN, FAHA, FAAN, Associate Professor, Executive Associate Dean, Director, Florence S. Downs PhD Program in Nursing Research and Theory Development

Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the Hartford Institute for Geriatric Nursing Web site .

Copies of the book *Evidence-Based Geriatric Nursing Protocols for Best Practice*, 4th edition: Available from Springer Publishing Company, 536 Broadway, New York, NY 10012; Phone: (212) 431-4370; Fax: (212) 941-7842; Web: www.springerpub.com .

Availability of Companion Documents

The following is available:

- *Try This*® - issue SP3: Cardiac Risk Assessment of the Older Cardiovascular Patient: The Framingham Global Risk Assessment Tools. New York (NY): Hartford Institute for Geriatric Nursing; 2 p. 2010. Electronic copies: Available in Portable Document Format (PDF) from the Hartford Institute for Geriatric Nursing Web site .

The ConsultGeriRN app for mobile devices is available from the Hartford Institute for Geriatric Nursing Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI on June 24, 2013. The information was verified by the guideline developer on August 6, 2013.

Copyright Statement

Disclaimer

NGC Disclaimer

The National Guideline Clearinghouseâ„¢ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.